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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,842	07/15/2003	Strom W. Smith		7619

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EXAMINER

DUONG, THANH P

ART UNIT PAPER NUMBER

1764

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,842

Applicant(s)

SMITH, STROM W.

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's remarks and amendments filed on December 6, 2005 have been carefully considered. Claims 1-2, 9, and 14-15 have been amended. Claims 1-18 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (5,498,270) in view of Long (1,448,972). Regarding claims 1-4 and 6-18, Smith discloses a sealing device (Fig. 1) for a sulfur trap (10) of the type comprising an upper chamber (16) for receiving liquid sulfur and process gas and a lower chamber (18) for receiving liquid sulfur, said device comprising: an opening (20) between said upper chamber (16) and said lower chamber (18); a hollow cylinder (22) extending upwardly from said opening (20) into said upper chamber (16); said cylinder having an upper edge (23); a spherical float (26); and a plurality of rods (24) within a chamber. Smith fails to disclose a counterweight attached to said float; said counterweight constructed to sealingly engage said upper edge in a float first position, and said float and said counterweight having a combined average density less than the density of molten sulfur. Long teaches the float (10) with a counterweight (11) with a guide stem (13) or

Art Unit: 1764

cleaning rod to facilitate in opening, closing, and aligning valve (11) or counterweight to the seat (9) of the discharge passage in order to remove steam condensate from the steam trap (page 1, lines 20-25, page 2, lines 62-70 and lines 105-112). Thus, it would have been obvious in view of Long to one having ordinary skill in the art to modify the sealing device of Smith with a counterweight engaged with the float in order to facilitate in opening and closing of the condensate discharge passage. With respect to the recitation of "float moveable between said float first position and a float floating position; and said float laterally moveable in said float floating position", the applied references disclose the features of claimed invention and the float of the applied references is capable of moving in float first position and float floating position. In addition, the movement of the float to various floating positions is a function mechanism and does not impart further structural limitation to the claimed invention. With respect to claims 3 and 9, both Smith and Long show the cylinder upper edge is beveled and Long further shows the counterweight (11) with beveled surface to engaged with the cylinder upper edge. With respect to claims 5 and 9, Long shows a counterweight with a lower flat surface but the applied references fail to disclose the counterweight lower surface is partially arcuate. However, the counterweight of Long provides the same performance of sealingly engage with upper edge of the float as the claimed invention. Furthermore, it would have been obvious in view of the applied references to modify the counterweight of the applied references with an arcuate surface or any shape surface for the counterweight lower surface just as long as the surface provides a tight seal between the counterweight lower surface against the upper edge of the float in a closed

position, since it has been held by the court that a change in shape is within the level of ordinary skill in the art. See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Response to Arguments

Applicant's arguments filed 12/6/05 have been fully considered but they are not persuasive. (1) Applicant argued "*there is no suggestion or motivation to combine with Long with Smith. Long teaches a valve seat extension at the bottom center of the float, providing an effective seal between the collection chamber (6) and passage (8). In contrast, the Smith reference teaches a float that is completely spherical, thereby rendering a seat extension to the float unnecessary as the spherical float seals at any orientation. Thus, teaches away from using a seat extension.*" Examiner respectfully disagrees. Smith provides a float (26) that is capable sealing itself in a closed position. However, Long teaches it is desirable to provide a counterweight (11) with rod extension 13 to facilitate in aligning the float with the drain passage to provide a tighter seal in a closed position, and it would have been obvious to combine the counterweight of Long in Smith reference to aid in alignment of the float to the drain passage. (2) Applicant argued the modification of Smith with the Long teaching reference imposes limitations to vertical movement. Examiner respectfully disagrees. Smith discloses a float (26) which is free to move up and down in vertical direction in the interior surface of cylindrical wall (12) as shown in Figure 1 and the modification of Smith by adding the counterweight (11) and cleaning rod (13) of Long does not restrict the vertical movement of Smith's float (26).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
February 7, 2006

TD

Carmen Garcia
Supervisory Patent Examiner
Art Unit 1700